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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,149	03/05/2002	Kotaro Akutsu	03560.002997	5461

5514 7590 03/31/2004

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NEW YORK, NY 10112

EXAMINER
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TSAI, H JEY

ART UNIT	PAPER NUMBER
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2812

DATE MAILED: 03/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

12

<b>Office Action Summary</b>	<b>Application No.</b> 10/090,149	<b>Applicant(s)</b> AKUTSU ET AL.	
	<b>Examiner</b> H.Jey Tsai	<b>Art Unit</b> 2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9, 16-26, 33-40, 47-53 and 60-65 is/are pending in the application.
- 4a) Of the above claim(s) 10-15, 27-32, 41-46 and 54-59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 16-26, 33-40, 47-53 and 60-65 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2812

***Election/Restriction***

Applicant's election with traverse of claims 1-9, 16-26, 33-40, 47-53 and 60-65 is acknowledged. Applicants contend that various embodiments are closely related and separate fields of search will not be required. This is not found persuasive because serious burden on the examiner is shown according to the criteria of MPEP that the patentable distinct species:

1. Separate classification thereof:

This shows that each distinct subject has attained recognition in the art as a separate subject for inventive effort, and also a separate field of search,. Patents need not be cited to show separate classification.

2. A separate status in the art when they are classifiable together.
3. A different field of search.

For these reasons set forth above, the restriction requirement is proper.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-8, 16-18, 20-25, 33-34, 36-39, 47-53 and 60-65 are rejected under 35 U.S.C. § 102(e) as being anticipated by Li, 6,417,914.

Art Unit: 2812

Li discloses a substrate processing apparatus comprising:

an alignment system ALG1/ALG2 disposed at a position such that information regarding a pattern arrangement of a substrate is obtained, col. 8, lines 53-57 and fig. 1,

a processing (illumination/exposure) system 10 disposed separately from the alignment system and used for processing a substrate,

a first substrate stage WST1 which is able to support a substrate and move in an xy plane, the xy plane being a plane parallel to a direction of an arrangement between the alignment system ALG1/ALG2 and the processing system 10 and a z axis being an axis perpendicular to the xy plane,

a second substrate stage WST2 which is able to support a substrate and move in the xy plane,

position measurement systems 58<sub>1</sub>/58<sub>2</sub>37 which measure the positions of the first and second substrate stages in the x and y directions by radiating beams, col. 12, lines 28+ and col. 10, lines 12+,

wherein, while the first and second substrate stages WST1/WST2 move between the alignment stage ALG1/ALG2 and the processing stage 10, the position measurement systems which radiate the beams are changed so that the beams are always radiated on the first and second substrate Stages WST1/WST2, col. 12, lines 28+,

a first substrate stage WST1 which is able to support a substrate and move in an xy plane, the xy plane being a plane parallel to a direction of an arrangement between the alignment system ALG1 and the processing system 10 and a z axis being an axis perpendicular to the xy plane, figs. 1-3 and col. 11, lines 50+,

a second substrate stage WST1 which is able to support a substrate and move in the xy plan,

Art Unit: 2812

wherein at least three position measurement systems are arranged for the position measurement in the x direction (two for each wafer stage and two for process stage 10, col. 12, lines 40+) and at least three position measurement systems (two for each wafer stage and two for process stage 10, col. 12, lines 40+) are arranged for the position measurement in the y direction, at least one of the position are arranged for the position measurement in the y direction, at least one of the position measurement systems for the position measurement in the y direction being disposed at an opposite side of another one of the position measurement systems for the position measurement in the y direction,

wherein a position  $58_1/58_2$  measurement operation of a substrate in the alignment system, the substrate being supported by one of the first and second substrate stages WST1/WST2...., and a processing operation of a substrate in the processing system, the substrate being supported by the other one of the first and second substrate stages WST1/WST2...., are performed in parallel, see fig. 1,

rotating the wafer stage around the z-axis, col. 12, lines 45+,

driving means of wafer stages, col. 11, lines 50+,

software network 90/91, col. 10, lines 23+.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 2812

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 9, 19, 26, 35 and 40 are rejected under 35 U.S.C 103 as being unpatentable over Li as applied to claims 1-3, 5-8, 16-18, 20-25, 33-34, 36-39, 47-53 and 60-65 above, and further in view of Mizutani 2001/0055117 and Inoue 2002/0063856.

The difference between the references applied above and the instant claim(s) is: Li teaches using main and wafer stage control system to obtain operational information and controlling the movement of the wafer stages and process (exposing) and aligning but does not teach using a display monitor and using the data for maintenance purposes.

However, Mizutani and Inoue teach at para. 68 and 81, respectively that using waveform signal, microscope and optical image.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above references' teachings with a display screen to display images and optical information as taught by Mizutani and Inoue because optical image and information can be used to monitor, aligning, process the wafers and using for maintenance data.

**Any inquiry of a general nature or clerical matters or relating to the status of this application or proceeding should be directed to the Group customer service whose telephone number is (703) 306-3329 and Fax number (703) 872-9306. Group receptionist telephone number 703-308-0956.**

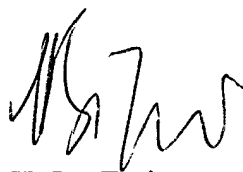
Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. Jey Tsai whose telephone number is (571) 272-1684. The examiner can normally be reached on from 7:00 Am to 4:00 Pm., Monday thru Friday.

Art Unit: 2812

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling can be reached on (571) 272-1679. The fax phone number for this Group is (703) 872-9306.

hjt

3/29/04

A handwritten signature in black ink, appearing to read 'H. Jey Tsai', is positioned above the printed name.

H. Jey Tsai  
Primary Examiner  
Patent Examining Group 2800